COLLEGE CODE : 9509

COLLEGE NAME:HOLYCROSS ENGINEERING COLLEGE

DEPARTMENT:CSE

STUDENT NM-ID:DE8B5C52E5439E988CD41EC9E8F50477

Roll No:950923104060

Date: 6.10.2025

Completed the project named as Phase 5

TECHNOLOGY PROJECT NAME:IBM-FE-Live Weather Dashboard

Submitted by,

Name:Yogalakshmi M

Mobile No:9342830545

1.Final Demo Walkthrough

🔍 Overview

The Live Weather Dashboard is a React-based web application that allows users to search for real-time weather information of any city using an API (OpenWeatherMap API).It displays temperature, humidity, wind speed, weather condition, and a dynamic icon based on current conditions.

🧭 Demo Flow

1. Open the website.
2. Enter a city name in the search bar.
3. Click “Search” → instantly displays live weather details.
4. Background or icons change according to the weather (sunny, cloudy, rainy, etc.).
5. Responsive layout works across mobile, tablet, and desktop.

🛠️ Tech Stack

Frontend: React.js, HTML5, CSS3, JavaScript

API: OpenWeatherMap API

Deployment: Netlify

📃 2. Project Report

Abstract

The Live Weather Dashboard provides instant and accurate weather data for any city worldwide. It helps users check real-time conditions like temperature, humidity, and wind speed using data fetched from the OpenWeatherMap API.

Objectives

To build a responsive and interactive weather dashboard.

To integrate a real-time API into a web interface.

To improve frontend development and API handling skills.

System Requirements

Category	Requirement
Hardware	Any system with 2GB RAM or higher
Software	VS Code, Node.js
Languages	HTML, CSS, JavaScript (React)

API Used OpenWeatherMap API

Modules

1. Search Module – user inputs a city name.
2. Weather Data Module – fetches data from API.
3. Display Module – displays temperature, humidity, and weather icon.
4. Error Handling Module – shows “City not found” for invalid inputs.

System Design

Data Flow: User Input → Fetch API → JSON Response → Display Weather Data

📸 3. Screenshots / API Documentation

Screenshots

(Add these in your report or README with image files)

1. Homepage
2. City Search Example (e.g., Chennai)
3. Weather Result Display
4. Error Message for Invalid City

API Documentation

Endpoint Method Description Example

/data/2.5/weather GET Fetch current weather data https://api.openweathermap.org/data/2.5/weather?q=Chennai&appid=YOUR_API_KEY&units=metric

API Parameters:

Q → City name

Appid → Your API key

Units → Metric / Imperial

💡 4. Challenges & Solutions

Challenge Solution

API key not loading properly Used .env file and process.env.REACT_APP_API_KEY for secure access

CORS or network issues Added HTTPS and verified API URL format

Page not updating after input Used React useState and useEffect to trigger re-render

Invalid city name crash Added condition to check response.cod before updating UI

📜 5. GitHub README & Setup Guide

🌦️ Live Weather Dashboard

A React web app that provides real-time weather updates for any city using the OpenWeatherMap API.

🚀 Features

- Search any city worldwide

- Displays temperature, humidity, wind speed, and condition

- Dynamic icons based on weather

- Responsive design for all devices

🧰 Tech Stack

React.js | HTML | CSS | JavaScript | OpenWeatherMap API | Netlify

⚙️ Setup Guide

1. Clone this repository:

```bash

Git clone https://github.com/yourusername/live-weather-dashboard.git

2. Move to the folder:

Cd live-weather-dashboard

3. Install dependencies:

Npm install
```

4. Create a .env file and add:

REACT_APP_API_KEY=your_api_key_here

5. Run the app:

Npm start

6. Visit http://localhost:3000

🧩 API Reference

https://api.openweathermap.org/data/2.5/weather?q={city name}&appid={API key}&units=metric

Repository

Repository Link: https://github.com/yoga-lakshmi30/yoga

🌍 Deployment

Deployed on Git Hub:https://yoga-lakshmi30.github.io/yoga/

Screenshots